Conclusion A high DOW increased the odds for hospitalisation five-fold. DOW could be beneficial in supporting assessment and clinical decision-making in telephone-triage as well as directly involving the caller in the decision-making process.

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68 RISKS AND BENEFITS USING A MOBILE-PHONE POSITIONING SYSTEM TO ACTIVATE LAY VOLUNTEERS TO OUT-OF-HOSPITAL CARDIAC ARRESTS

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Aim The 'HeartRunner'-system is a mobile-phone positioning system that activates lay volunteers (heart-runners) to retrieve a publicly accessible automated external defibrillator (AED) and start resuscitation in out-of-hospital cardiac arrests (OHCAs). We investigated the risks and benefits of the HeartRunner-system.
Method In cases of suspected OHCA, the Emergency Medical Dispatch Centre activates the HeartRunner-system which automatically alerts heart-runners<1,100 m from the OHCA. After the alarm, all activated heart-runners receive an electronic survey regarding system functionality and physical and psychological impact of the experience. Data was collected from September 1 st to December 31th 2017.
Results In 273 cases, 1215 heart-runners were activated and received the survey. The response rate was 94.5%. Of 672 accepting the alarm, 69.6% (n=468) arrived at the OHCA. Of those, 32.3% (n=151) arrived prior to the ambulance, which was in 36.3% (99/273) of all cases. In 14.3% (n=39/273) of the cases, a heart-runner applied an AED, and in 28.2% (n=11/39) defibrillated the patient. Only 0.4% (n=3) reported minor physical injuries, and 0.7% (n=5) reported severe psychological distress. They were subsequently debriefed by health care professionals and screened for post-traumatic stress symptoms; one person showed signs of moderate distress.
Conclusion Using a mobile-phone positioning system, heart-runners were able to arrive prior to the ambulance in one third of all cases. Of those, every fourth applied an AED of which 28.2% defibrillated the patient. It seems physically and psychologically safe for heart-runners to attend in OHCA resuscitation.
Conflict of interest None
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69 PRE-HOSPITAL PAEDIATRIC PAIN MANAGEMENT IN THE LONDON AMBULANCE SERVICE

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Aim In 2006 the London Ambulance Service (LAS) developed a laminated card to allow for better pain assessment for children. The card contained a faces-based scoring system used in hospitals.[1] LAS paediatric pain assessment and management was reviewed in 2012 demonstrating improvement in assessment of pain as a result of the card. Administration of pain relief also improved, however further progress was needed in analgesia provision and immobilisation. Following the review, paediatric pain management and immobilisation was included in LAS clinical training sessions, and a paediatric immobilisation equipment review was conducted. This project aimed to determine whether these additional initiatives further improved paediatric pain management.
Method A retrospective review was undertaken of 229 clinical records from October 2014 to January 2015 for patients aged 12 years and under whose primary complaint was a possible fracture or dislocation. Clinical records were compared with national clinical practice guidelines for paediatric pain management.
Results Findings showed nearly all patients had a pain assessment recorded (n=223, 97%), an improvement sustained from 2012 (+34% since 2006). We found an increase in the percentage of children having their injury immobilised (+22% since 2012; sustained from 2006; n=90/216, 42%) and being given analgesia when required (+18% since 2012;+61% since 2006; n=170/209, 84%).
Conclusion The systematic cyclical process of reviewing care, implementing change and re-measuring, whilst resource intensive, has demonstrated huge improvements in paediatric pain management over time.

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70 THE DIGITAL AMBULANCE: ELECTRONIC PATIENT CLINICAL RECORDS IN PREHOSPITAL EMERGENCY CARE

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Aim Electronic Records in Ambulances (ERA) is a two-year study examining the opportunities and challenges of prehospital implementation of electronic patient clinical records (ePCR) in the UK. National policy encourages digitisation of health services,[1] but this transition may not be straightforward.[2]
Method A telephone survey of progress implementing ePCR in all 13 UK ambulance services explored systems, implementation processes, perceived value and future plans. Interviews with information managers were thematically analysed. Case

studies in four UK ambulance services involved observing clinical work, focus groups with ambulance clinicians, interviews with key stakeholders and analysis of routine data.
Results Baseline survey: 7/13 services were using ePCR, with mixed compliance from staff. Reported benefits concerned improved data access for audit. Of the 6/13 services currently using paper records, four had previously adopted ePCR, but reverted. Case studies: Initial findings suggest some common themes:

- Constant change: 3/4 services were already undertaking or considering transition to a second generation system; 1/4 was undertaking a phased rollout of ePCR.
- Digital diversity: no standard hardware or software in use.
- Indirect input: patient data was still sometimes transferred to the ePCR from another source (eg writing on a glove) or entered retrospectively.
- Data dump: ePCRs acted mainly as a store, rather than transferring information to other care providers or supporting decision making.

Conclusion Although ePCRs offer opportunities to support prehospital care, the transition to the new technology is neither linear nor co-ordinated, with full benefits not yet realised in terms of integration and data sharing.

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71 CLINICAL PRESENTATION OF PULMONARY EMBOLISM AMONG PATIENTS IN THE EMERGENCY DEPARTMENT

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Aim Pulmonary embolism (PE) is an important clinical entity known to cause a wide range of symptoms. Morbidity and mortality of PE are high. However, knowledge of symptomatology is sparse. Aim: To elucidate the clinical presentation of emergency department (ED) patients diagnosed with PE.
Methods We carried out a cross-sectional study of adult patients attending the EDs at Odense University Hospital and Hospital of Southwest Jutland. The main symptom at presentation was prospectively registered. ED and hospital discharge diagnosis was sampled from the Danish national health registry. Patients with PE were identified based on discharge diagnoses (ICD-10 code I26.0 or I26.9) from the ED or following hospitalisation.
Results Among 24 124 contacts to the EDs, 322 (1.3%) were diagnosed with PE. The main presenting symptom was respiratory distress (31%; n=101), while 26% (n=85) had symptoms suspicious of heart disease such as dyspnea of cardiac cause, chest pain and palpitation, 8% (n=27) fainting/syncope or suspected neurological disorders, 8% (n=26) pain in the lower limb, and 6% (n=18) had fever as their main symptom.
Conclusion PE patients have a wide variety of symptoms and most PE patients present with other symptoms than dyspnea.
Conflict of interest None
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72 CAN YOU TRUST ON YOUR PATIENT? – THE ASSOCIATION BETWEEN DEGREE-OF-WORRY VS SELF-RATED HEALTH IN ACUTE ILLNESS

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Aim Self-rated health (SRH) is strongly associated with mortality,[1] and acute hospitalisation in chronic illness.[2] An association between self-rated health and acute hospitalisation in injury and acute illness has not been shown. The 'degree-of-worry'-scale (DOW) has been shown to be associated with acute hospitalisation.[3] The study aimed to investigate the associations of SRH and DOW on acute hospitalisation in a population of callers to a medical helpline.
Method A prospective cohort study of 11 413 callers to a medical helpline between January 24 to February 9, 2017. Callers were asked to rate their health (1=excellent, 5=poor) and DOW (1=minimum worry, 5=maximum worry) before talking to a call-handler. Primary outcome was hospitalisation within 48 hours after first telephone contact, which was obtained from the National Patient Register. Logistic regression was performed.
Results A total of 11 305 callers with information on SRH and DOW were obtained of which 573 (5.1%) were hospitalised. Age-adjusted odds ratio for being hospitalised with a poor/bad SRH was 2.03 (95% CI: 1.64 to 2.53) and intermediate SRH 1.07 (95% CI: 0.81 to 1.4) compared with a good/excellent SRH. Callers with a high and intermediate DOW had an odds ratio of 4.78 (95% 3.6–6.34) and 2.1 (95% CI: 1.54 to 2.85) compared with a low DOW for hospitalisation. Adjusting for age did not change the estimates.
Conclusion DOW has a stronger association to acute hospitalisation in injury, illness and exacerbation of chronic illness than SRH. Asking about DOW could improve guidance to the dynamic process of decision-making.

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